

LISTING OF THE CLAIMS:

Claim 1 (Currently Amended) A method for forming a semiconductor structure comprising the steps of:

providing a structure having at least one wire bond pad in contact with a metal line of an interconnect structure, said at least one wire bond pad having an exposed surface portion;

forming a metallic cap on at least the exposed upper surface portion of the wire bond pad, said metallic cap is resistant to alkaline attack; and

forming Ni/Au metallization on said metallic cap, wherein the Ni/Au pad metallization comprises electroless deposition of Ni, immersion deposition of Au and electroless deposition of Au.

Claim 2 (Original) The method of Claim 1 wherein the metallic cap is formed on the exposed surface portion of the wire bond pad through an opening formed in an overlaying passivation stack.

Claim 3 (Original) The method of Claim 1 wherein the metallic cap is formed atop an entire surface of a metal layer and then the metallic cap and metal layer are selectively etched to form the metallic cap on at least the exposed upper surface portion of the wire bond pad.

Claim 4 (Original) The method of Claim 1 wherein the metal line is comprised of Cu.

Claim 5 (Original) The method of Claim 1 wherein said structure further includes a barrier and a lower passivation layer formed atop the interconnect structure.

Claim 6 (Original) The method of Claim 1 wherein the wire bond pad is comprised of Al or an aluminum alloy.

Claim 7 (Cancelled)

Claim 8 (Original) The method of Claim 1 wherein the metallic cap comprises TiN/Ti or TiN/Al.

Claim 9 (Original) The method of Claim 8 wherein the Al layer of the metallic cap is cleaned/pretreated prior to forming the Ni/Au metallization.

Claim 10 (Original) The method of Claim 8 wherein the Ti layer of the metallic cap is activated prior to forming the Ni/Au metallization.

Claim 11 (Original) The method of Claim 1 further comprising forming a barrier layer between at least the metal bond pad and the metal line.

Claim 12 (Original) The method of Claim 1 wherein said metal bond pad and said metal line are in contact through a via opening formed in a lower passivation layer that is located on said interconnect structure.

Claims 13-20 (Cancelled)

Claim 21 (New) The method of Claim 1 further comprising bonding a wire to said Ni/Au metallization.

Claim 22 (New) A method for forming a semiconductor structure comprising the steps of:

providing a structure having at least one wire bond pad in contact with a metal line of an interconnect structure, said at least one wire bond pad having an exposed surface portion;

forming a metallic cap on at least the exposed upper surface portion of the wire bond pad, said metallic cap is resistant to alkaline attack;

forming Ni/Au metallization on said metallic cap; and

bonding a wire to said Ni/Au metallization.